



Brian McGonigle

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Present Position:

Senior Research Biologist  
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Brian.McGonigle@usa.dupont.com

Education:

Ph. D. in Biological Sciences  
Department of Biology, Yale University  
May 1995  
advisor: Dr. Timothy M. Nelson

Honors Bachelor of Arts in Biological Sciences  
University of Delaware  
May 1987  
Advisor: Dr. Diane S. Herson

Fellowships:

National Science Foundation Graduate Fellowship (1988-1991)  
University Fellowship (Yale University) (1987-1988)  
Peter White Fellowship (1986-1987)

Awards and Honors:

DuPont CR & D Accomplishment Award (October, 1997)  
DuPont CR & D Way-to-Go-Award (April, 1996)  
School of Life and Health Sciences Outstanding Senior (1987)  
Inducted in Beta, Beta, Beta spring 1985 (president 1986-1987)  
Richard M. Johnson Memorial Award (1986)

Professional Experience:

Section Research Biologist  
June 30, 1999-March 1-2002  
Research Biologist  
July 1, 1997-June 30, 1999  
DuPont Crop Genetics

Visiting Research Scientist  
DuPont Central Research & Development  
October 15, 1995-June 30, 1997  
Advisor Dr. Daniel P. O'Keefe

Postdoctoral Associate  
Yale University  
February 1995-January 1995  
Advisor: Dr. Vivian F. Irish

Research Associate/Teaching Associate  
Yale University  
September 1987-January 1995  
Advisor Dr. Timothy M. Nelson

Staff Assistant for Advanced Studies Program  
Summers 1985 and 1986  
University of Delaware

### List of Publications

- Carl A. Maxwell, Maria A. Restrepo-Hartwig, Aideen O. Hession, and Brian McGonigle (in press) Metabolic engineering of soybean for improved flavor and health benefits *in Recent Advances in Phytochemistry*, volume 38 J.T. Romeo (ed.) Pergamon.
- Yu, Oliver, June Shi, Aideen O. Hession, Carl A. Maxwell, Brian McGonigle, and Joan T. Odell (2003) Metabolic engineering to increase isoflavone biosynthesis in soybean seed. *Phytochemistry* **63**:753-763
- Cahoon, Edgar B., Kevin G. Ripp, Sarah E. Hall, and Brian McGonigle (2002) Transgenic production of epoxy fatty acids by expression of a cytochrome P450 enzyme from *Euphorbia lagascae* seed. *Plant Physiology* **128**: 615-24.
- McGonigle, Brian, Sharon Keeler, Sze-Mei Cindy Lau, Mary Koeppe, and Daniel P. O'Keefe(2000) A genomics approach to the comprehensive analysis of the glutathione S-transferase gene family in soybean and maize. *Plant Physiology*. **124**: 1105-1120.
- Yu, Oliver, Woosuk Jung, June Shi, Robert A. Croes, Gary M. Fader, Brian McGonigle, and Joan T. Odell (2000) Production of the isoflavones genistein and daidzein in non-legume dicot and monocot tissues. *Plant Physiology*. **124**: 781-794.
- Jung, Woosuk, Oliver Yu, Sze-Mei Cindy Lau, Daniel P. O'Keefe, Joan Odell, Gary Fader, and Brian McGonigle. (2000) Identification and expression of isoflavone synthase, the key enzyme for biosynthesis of isoflavones in legumes. *Nature Biotechnology*. **18**: 208-212.
- McGonigle, Brian, Sze-Mei Lau, Lee D. Jennings, and Daniel P. O'Keefe. (1998) Homoglutathione selectivity by soybean glutathione s-transferases. *Pesticide Biochemistry and Physiology*. **62**:15-25.
- McGonigle, Brian and Daniel P. O'Keefe (1998) GST $\alpha$ , a 2,4-D inducible glutathione s-transferase from *Glycine max* (soybean) cv Williams 82 (AF048978). *Plant Physiology*. **117**:332.
- McGonigle, Brian, Sze-Mei Cindy Lau and Daniel P. O'Keefe. (1997) Endogenous reactions and substrate specificity of herbicide metabolizing enzymes *in Regulation of Enzymatic Systems Detoxifying Xenobiotic in Plants*. K.K. Hatzios (ed.) Kluwer Academic Publishers. pp. 9-18.
- McGonigle, Brian, Karim Bouhidel and Vivian F. Irish. (1996) Nuclear localization of the *Arabidopsis* APETALA3 and PISTILLATA homeotic gene products depends on their simultaneous expression. *Genes & Development*. **10**:1812-1821.
- Irish, Vivian, Christopher Day, Karim Bouhidel, Brian McGonigle, Susan Carr, Theresa Hill, Elena Wright, and Pablo Jenik. (1996) Genetic analysis of petal and stamen development in *Arabidopsis*. *Flowering Newsletter*. **21**:3-9.
- McGonigle, Brian, Lien B. Lai and Timothy Nelson. (1996) Sequences of seven cDNAs (Accession Nos. U29933 to U29939) encoding the Rubisco small subunit from *Flaveria pringlei*. *Plant Physiology*. **111**:1354.
- McGonigle, Brian and Timothy Nelson. (1995) C4 Isoform of NADP-Malate Dehydrogenase: cDNA cloning and expression in leaves of C4, C3, and C3/C4 intermediate species of *Flaveria*. *Plant Physiology*. **108**:1119-1126.
- Schultes, Neil P., Israel Zelitch, Brian McGonigle and Timothy Nelson. (1994) The primary leaf catalase gene from *Nicotiana tabacum* and *Nicotiana sylvestris*. *Plant Physiology*. **106**:399-400.

Zelitch, Israel, Evelyn A. Hvir, Brian McGonigle, Neil A. McHale and Timothy Nelson. (1991) Leaf catalase mRNA and catalase-protein levels in a high-catalase tobacco mutant with O<sub>2</sub>-resistant photosynthesis. *Plant Physiology*. **97**:1592-1595.

Kaur-Sawhney, Ravindar, Geeta Kandpal, Brian McGonigle and Arthur W. Galston. (1990) Further experiments on spermidine-mediated floral-bud formation in thin-layer explants of Wisconsin 38 tobacco. *Planta*. **181**:212-215.

Herson, Diane S., Brian McGonigle, Mary Anne Payer and Katherine H. Baker. (1987) Attachment as a factor in the protection of Enterobacter cloacae from chlorination. *Applied and Environmental Microbiology*. **53**:1178-1180.

#### United States Patents (issued)

6,545,200 Sterol biosynthetic enzymes. Cahoon, Rebecca E., Famodu, Omolayo O., McGonigle, Brian, Rafalski, J. Antoni and Sakai, Hajime

6,171,839 Soybean glutathione-S-transferase enzymes. McGonigle, Brian and O'Keefe, Daniel P.

6,168,954 Soybean glutathione-S-transferase enzymes. McGonigle, Brian and O'Keefe, Daniel P.

6,096,504 Maize glutathione-S-transferase enzymes. McGonigle, Brian and O'Keefe, Daniel P.

6,063,570 Soybean glutathione-S-transferase enzymes. McGonigle, Brian and O'Keefe, Daniel P.

6,054,638 Soybean ADP ribosylation factor. McGonigle, Brian and O'Keefe, Daniel P.

5,962,229 Maize glutathione-S-transferase enzymes. McGonigle, Brian and O'Keefe, Daniel P.

## **References**

**Dr. William D. Hitz**

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